UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,204	08/08/2001	Michael J. Kirkwood	50325-0531	4362

29989	7590	03/25/2004	

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EXAMINER
EHICHIOYA, FRED I

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 03/25/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No	Applicant(s)
Office Action Summary		09/925,204	KIRKWOOD ET AL.
		Examiner	Art Unit
		Fred I. Ehichioya	2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .
2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1 - 46* is/are pending in the application.
4a) Of the above claim(s) *27 - 31, 33, 37, 39, 41, 43 and 45* is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1 - 26, 32, 34, 36, 38, 40, 42, 44 and 46* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☒ Claim(s) *1 - 46* are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on *08 August 2001* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because Figs. 4C and 4F

are not of sufficient quality to permit examination. Any structural detail that is essential

for a proper understanding of the disclosed invention should be shown in the drawing.

MPEP § 608.02(d).

Applicant is advised to employ the services of a competent patent draftsperson

outside the Office, as the U.S. Patent and Trademark Office no longer prepares new

drawings. A proposed drawing correction or corrected drawings are required in reply to

the Office action to avoid abandonment of the application. The objection to the

drawings will not be held in abeyance.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I.   Claims 1 – 26, 32, 34, 36, 38, 40, 42, 44 and 46, drawn to data

store in one or more content management, classified in class 707,

subclass 103.

Group II.   Claims 27 – 31, 33, 35, 37, 39, 41, 43 and 45, drawn to a method of

arranging contents in a web page, classified in class 707, subclass 10.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions listed as Group I and Group II are related as subcombinations

disclosed as usable together in a single combination. The subcombinations are distinct

from each other if they are shown to be separately usable. In the instant case, invention

has separate utility as follows:

Group I has separate utility such as an object-oriented data structure; its

maintenance and organization in memory.

Group II has separate utility such as management of distributed database data

and file access and retrieval, and retrieval of database data and files from a centralized

or remote site. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have

acquired a separate status in the art as shown by their different classification, restriction

for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the

search required for Group I is not required for Group II, restriction for examination

purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have

acquired a separate status in the art because of their recognized divergent subject

matter, restriction for examination purposes as indicated is proper.

During telephone conversation with Christopher Palermo, Attorney for the

Applicant, Registration Number 42,056 on February 26, 2004 a provisional election was

made without traverse to prosecute the invention of Group I, claims 1 – 26, 32, 34, 36,

38, 40, 42, 44 and 46.Affirmation of this election must be made by applicant in reply to

this Office action. Claims 27 – 31, 33, 35, 37, 39, 41, 43, and 45 withdrawn from further

consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected

invention.

Applicant is reminded that upon the cancellation of claims to a non-elected

invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

or more of the currently named inventors is no longer an inventor of at least one claim

remaining in the application. Any amendment of inventorship must be accompanied by

a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

5. Claims 1 – 26, 32, 34, 36, 38, 40, 42, 44 and 46 are rejected under 35 U.S.C.

103(a) as being unpatentable over U.S. Patent 6,085,187 issued to Gary Lee

Carter at al (hereinafter "Carter") in view of U.S. Patent 6,230,173 issued to

Patrick J. Ferrel et al (hereinafter "Ferrel").

Regarding claim 1, Carter teaches a method of relating data stored in one or more

content management systems for an enterprise, the method comprising the steps of:

managing a vocabulary database comprising a plurality of data structures describing

atomic concepts among names in an enterprise-specific vocabulary and a plurality of

data structures describing relationships among the atomic concepts (see column 5,

lines 4 – 16; "concepts" are nodes, terminals or roots and branches in a tree structure;

and "atom concepts" are data items); and

wherein the plurality of data structures describing atomic concepts include a first

information object data structure comprising data indicating a first reference to a first

chunk in the one or more content management systems (see column 1, lines 42 – 65),

and wherein the plurality of data structures describing relationships include a first

relationship data structure describing a relationship between the first information object

data structure and a second concept data structure of the plurality of data structures

describing atomic concepts (see column 4, lines 23 – 38).

Carter does not explicitly teach managing a plurality of information chunks in one or

more content management systems, each chunk of the plurality of information chunks

comprising a unit of data for storage and retrieval operations.

Ferrel teaches managing a plurality of information chunks in one or more content

management systems, each chunk of the plurality of information chunks comprising a

unit of data for storage and retrieval operations (see column 2, lines 20 – 32 and column

8, lines 1 – 13; "information chucks" or "chucks" are information objects or objects).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine teaching of Ferrel with the teaching of Carter wherein the objects

that manage the content always have direct incremental access to their piece of

storage. The motivation is that there is better performance when incremental objects are

written to the storage.

Regarding claim 2, Carter teaches the second concept is different than the first

information object (see column 4, lines 53 – 54).

Regarding claim 3, Carter teaches the first relationship data structure describes

the relationship involving a third concept data structure of the plurality of data structures

describing atomic concepts (see column 4, lines 55 – 62).

Regarding claim 4, Ferrel teaches the relationships include relationships of a

child-of relationship type; a hierarchy is a subset of the atomic concepts related by a

series of one or more relationships of the child-of relationship type to a root concept of

the atomic concepts; and the second concept data structure describes a concept that

belongs to a particular hierarchy having a particular root concept (see column 33, lines 54 – 63).

Regarding claim 5, Carter teaches the particular root concept is one of an information type root concept, a document type root concept, a product type root concept, a technology type root concept, a solution type root concept, and a user type root concept (see column 2, lines 18 – 33).

Regarding claim 6, Carter teaches the first relationship data structure describes the relationship involving a third concept data structure of the plurality of data structures describing atomic concepts; and the third concept data structure describes a concept that belongs to a different hierarchy having a different root concept (see column 4, lines 32 – 38).

Regarding claim 7, Ferrel teaches the first chunk is one of a block of text, an application, a query for a database, a vector graphic, an image, audio data, and video data (see column 1, lines 22 – 40).

Regarding claim 8, Carter teaches the first reference comprises one of a file name, a network resource address, a universal resource locator (URL) address, a record identification in a predetermined database, a record identification in a predetermined content management system (see column 12, lines 36 – 44).

Regarding claim 9, Ferrel teaches the plurality of information chunks reside in a plurality of content management systems; and said step of managing the plurality of information chunks further comprises employing a data integration tool to retrieve the first chunk from a content management system that resides on a remote platform accessible through a network (see column8, lines 23 – 38).

Regarding claim 10, Ferrel teaches the step of generating and storing a subset of the plurality of information chunks into a content cache based at least in part on data in a second relationship data structure describing a second relationship of the relationships (see column 1, lines 66 – 67 and column 2, lines 1 – 8).

Regarding claim 11, Carter teaches the step of generating and storing a subset of the vocabulary database into a concept cache based at least in part on data in the second relationship data structure (see column 5, lines 9 – 16).

Regarding claim 12, Ferrel teaches the step of generating a page for sending over a network to a client process based on data in the concept cache and the content cache (see column 30, lines 11 – 35 and column 37, lines 36 – 48).

Regarding claim 13, Ferrel teaches the page is organized based at least in part on data in a relationship data structure in the concept cache (see column 16, lines 52 – 58).

Regarding claim 14, Ferrel teaches the page displays information based on at least one information chunk in the content cache (see column 38, lines 1 – 10).

Regarding claim 15, Ferrel teaches the step of editing at least one of the concept cache and the content cache (see column 27, lines 39 – 50).

Regarding claim 16, Ferrel teaches said step of generating and storing the subset of the plurality of information chunks further comprising combining at least two information chunks of the plurality of information chunks into a single information chunk in the content cache (see column 8, lines 1 – 13).

Regarding claim 17, Ferrel teaches wherein the at least two information chunks have corresponding information object data structures which are related to corresponding concept data structures; and at least two of the corresponding concept data structures are related by the second relationship (see column 6, lines 36 – 67).

Regarding claim 18, Ferrel teaches step of generating and storing a subset of the vocabulary database into a concept cache further comprising de-normalizing the concept cache to improve speed of retrieval by allowing a concept data structure for a concept that participates in more than one relationship to be stored more than once in the concept cache (see column 31, lines 53 – 64).

Regarding claim 19, Ferrel teaches managing the plurality of information chunks comprising employing a first set of software tools including at least one of tools for defining the first information object data structure type and instance and for defining the first relationship data structure type and instance (see column 10, lines 27 – 67).

Regarding claim 20, Ferrel teaches the steps of generating and storing a first subset of the plurality of information chunks into a first content cache for managing content of a Web page (see column 6, lines 47 – 62).

Regarding claim 21, Ferrel teaches the step of managing the first subset by employing a second set of software tools including at least one of tools for editing the first information object data structure, for editing the first relationship data structure, for populating the first content cache, for populating a first concept cache, for retrieving from the first content cache, for combining two or more information chunks into a new information chunk,   and for de-normalizing the first concept cache to improve speed of retrieval by allowing a concept data structure for a concept that participates in more than one relationship to be stored more than once in the first concept cache (see column 10, lines 27 – 45).

Regarding 22, Ferrel teaches wherein the first subset of the plurality of information chunks excludes information chunks that have become obsolete (see column 11, lines 47 – 58).

Regarding claim 23, Ferrel teaches the first subset of the plurality of information chunks excludes information chunks that have not been released (see column 15, lines 43 – 47).

Regarding claim 24, Ferrel teaches the steps of generating and storing a second subset of the first content cache into a second content cache for staging content for the Web page (see column 24, lines 10 – 59).

Regarding claim 25, Ferrel teaches the step of managing the second subset by employing a third set of software tools including at least one of tools for editing the first information object data structure, for populating the second content cache, for populating a secondconcept cache, for ensuring each information chunk in the second content cache has an information object data structure and a relationship to another concept in the second concept cache, and for forming a search index for the second content cache (see column 10, lines 27 – 45).

Regarding claim 26, Ferrel teaches the step of replicating the second content cache to one or more Web servers for providing content to a Web page generating process on each of the one or more Web servers (see column 12, lines 51 – 67).

Regarding claim 32, Carter teaches a method of relating data stored in one or more content management systems for an enterprise, the method comprising the steps of :

managing a vocabulary database comprising a plurality of data structures describing atomic concepts among names in an enterprise-specific vocabulary and a plurality of data structures describing relationships among the atomic concepts (see column 5, lines 4 – 16, "atomic concepts" are data items or items).

Carter does not explicitly teach managing a plurality of information chunks in one or more content management systems, each chunk of the plurality of information chunks comprising a unit of data for storage and retrieval operations; and arranging content in a document based at least in part on data in the vocabulary database, the content based at least in part on an information chunk of the plurality of information chunks.

Ferrel teaches managing a plurality of information chunks in one or more content management systems, each chunk of the plurality of information chunks comprising a unit of data for storage and retrieval operations (see column 2, lines 20 – 32 and column 8, lines 1 – 13); and

arranging content in a document based at least in part on data in the vocabulary database, the content based at least in part on an information chunk of the plurality of information chunks (see column 6, lines 36 – 67 and column 7, lines 1 – 45).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine teaching of Ferrel with the teaching of Carter wherein the objects that manage the content always have direct incremental access to their piece of storage. The motivation is that there is better performance when incremental objects are written to the storage.

Claim 34 is essentially the same as claim 1 except that it sets forth the claimed invention as a computer-readable medium rather than a method and therefore rejected for the same reasons as applied hereinabove.

Claim 36 is essentially the same as claim 32 except that it sets forth the claimed invention as a computer-readable medium rather than a method and therefore rejected for the same reasons as applied hereinabove.

Claim 38 is essentially the same as claim 1 except that it sets forth the claimed invention as a system rather than a method and therefore rejected for the same reasons as applied hereinabove.

Claim 40 is essentially the same as claim 32 except that it sets forth the claimed invention as a system rather than a method and therefore rejected for the same reasons as applied hereinabove.

Regarding claim 42, Carter teaches a computer system for relating data stored in

one or more content management systems for an enterprise, the system comprising:

a vocabulary database comprising a plurality of data structures describing atomic

concepts among names in an enterprise-specific vocabulary and a plurality of data

structures describing relationships among the atomic concepts (see column 5, lines 4 –

16), wherein the plurality of data structures describing atomic concepts include a first

information object data structure comprising data indicating a first reference to a first

chunk in the one or more content management systems (see column 1, lines 42 – 62),

and the plurality of data structures describing relationships include a first relationship

data structure describing a relationship between the first information object data

structure and a second concept data structure of the plurality of data structures

describing atomic concepts (see column 4, lines 23 – 38).

Carter does not explicitly teach a computer-readable medium for storing a

plurality of information chunks in one or more content management systems, each

chunk of the plurality of information chunks comprising a unit of data for storage and

retrieval operations; and one or more processors configured for managing the plurality

of information chunks, and managing the vocabulary database.

Ferrel teaches a computer-readable medium for storing a plurality of information

chunks in one or more content management systems, each chunk of the plurality of

information chunks comprising a unit of data for storage and retrieval operations (see

column 2, lines 20 – 32 and column 8, lines 1 – 13); and

one or more processors configured for managing the plurality of information

chunks, and managing the vocabulary database (see column 12, lines 4 – 8).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine teaching of Ferrel with the teaching of Carter wherein the objects

that manage the content always have direct incremental access to their piece of

storage. The motivation is that there is better performance when incremental objects are

written to the storage.

Claim 44 is essentially the same as claim 32 except that it sets forth the claimed

invention as a computer system rather than a method and therefore rejected for the

same reasons as applied hereinabove.

Regarding claim 46, Carter teaches a method of retrieving and delivering related

data that is stored in one or more content management systems for an enterprise, the

method comprising the steps of:

creating and storing a vocabulary database comprising a plurality of data

structures describing a plurality of atomic concepts among names in an enterprise--

specific vocabulary and a plurality of data structures describing relationships among the

atomic concepts (see column 5, lines 4 – 16, "concepts" are nodes, terminals or roots

and branches of a tree structure; "atomic concepts" are data items or items), wherein

the plurality of data structures describing atomic concepts include a first information

object data structure comprising data indicating a first reference to a first chunk in the

one or more content management systems (see column 1, lines 42 – 62), and wherein

the plurality of data structures describing relationships include a first relationship data

structure describing a relationship between the first information object data structure

and a second concept data structure of the plurality of data structures describing atomic

concepts (see column 4, lines 23 – 53), wherein the second concept data structure is

associated with one or more second chunks of information (see column 4, lines 54 –

62);

Carter does not explicitly teach creating and storing a plurality of information

chunks in one or more content management systems, each chunk of the plurality of

information chunks comprising a unit of data for storage and retrieval operations; and

receiving a query for a first concept that is among the plurality of atomic concepts;

selecting the first chunk and all of the second chunks that are associated with the

second concept data stricture and related to the first chunk by the relationship described

in the first relationship data structure; returning the first chunk and all of the second

chunks for use in one or more electronic documents relating to the first concept.

Ferrel teaches creating and storing a plurality of information chunks in one or

more content management systems, each chunk of the plurality of information chunks

comprising a unit of data for storage and retrieval operations (see column 2, lines 20 –

32 and column 8, lines 1 – 13); "information chucks" or "chucks" are information objects

or objects; and

receiving a query for a first concept that is among the plurality of atomic concepts

(see column 20, lines 24 – 31);

selecting the first chunk and all of the second chunks that are associated with the
second concept data stricture and related to the first chunk by the relationship described
in the first relationship data structure (see column 20, lines 1 – 6 and column 24, lines
25 – 42);

returning the first chunk and all of the second chunks for use in one or more
electronic documents relating to the first concept (see column 20, lines 12 – 13).

It would have been obvious to one of ordinary skill in the art at the time the invention
was made to combine teaching of Ferrel with the teaching of Carter wherein the objects
that manage the content always have direct incremental access to their piece of
storage. The motivation is that there is better performance when incremental objects are
written to the storage.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 703-305-8039. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred I. Ehichioya
Examiner
Art Unit 2172
March 19, 2004

SHAHID ALAM
PRIMARY EXAMINER